AMENDMENT UNDER 37 C.F.R. 1.116 - EXPEDITED PROCEDURE

Serial Number: 10/705,315

Filing Date: November 10, 2003

Title: DATA FLOW MANAGEMENT APPARATUS, SYSTEMS, AND METHODS (As Amended)

Assignee: Intel Corporation

amount;

IN THE CLAIMS

Page 2

Dkt: 884.A59US1 (INTEL)

Please amend the claims as follows.

1. (Currently Amended) A method, comprising:

controlling a data flow associated with at least one of a selected number of ports having a first actual usage value above a determined average shared resource usage value associated with the selected number of ports sharing a resource, wherein the selected number of ports each use an amount of the resource greater than after exceeding a guaranteed minimum amount of the resource.

- 2. (Original) The method of claim 1, further comprising: determining the determined average shared resource usage value.
- 3. (Original) The method of claim 1, further comprising:
 removing a control on the data flow associated with the at least one of the selected
 number of ports after the at least one of the selected number of ports is determined to have a
 second actual usage value below the determined average shared resource usage value.
- 4. (Currently Amended) The method of claim 1, wherein determining the determined average shared resource usage value comprises:

 selecting the selected number of ports by locating at least one port included in a plurality of ports using the [[an]] amount of the resource greater than the guaranteed minimum

determining a cumulative shared usage value based on the selected number of ports; and determining the determined average shared resource usage value by dividing the cumulative shared usage value by the selected number of ports.

5. (Original) The method of 1, further comprising:

Filing Date: November 10, 2003

Title: DATA FLOW MANAGEMENT APPARATUS, SYSTEMS, AND METHODS (As Amended)

Assignee: Intel Corporation

adjusting the selected number of ports to provide a scaled selected number of ports based on a port speed associated with a first port and a port speed associated with a second port, wherein the first port and the second port are included in the selected number of ports.

- 6. (Original) The method of claim 1, further comprising: repeatedly determining the determined average shared resource usage value associated with the selected number of ports.
- 7. (Original) The method of claim 1, wherein controlling the data flow further comprises: controlling the data flow associated with the at least one of the selected number of ports having the first actual usage value above a dynamic threshold value.
- 8. (Original) The method of claim 7, further comprising: setting the dynamic threshold value as a sum of the determined average shared resource usage value and a delta value.
- 9. (Original) The method of claim 8, further comprising:
 determining the delta value according to a port speed and an overall resource usage value including a cumulative shared usage value based on the selected number of ports.
- 10. (Original) The method of claim 1, wherein the resource comprises a memory.
- 11. (Currently Amended) An article comprising a machine-accessible medium having associated data, wherein the data, when accessed, results in a machine performing:

controlling a data flow associated with at least one of a selected number of ports having an actual usage value above a determined average shared resource usage value associated with the selected number of ports sharing a resource, wherein the selected number of ports each use an amount of the resource greater than after exceeding a guaranteed minimum amount of the resource.

Serial Number: 10/705,315

Filing Date: November 10, 2003
Title: DATA FLOW MANAGEMENT APPARATUS, SYSTEMS, AND METHODS (As Amended)

Assignee: Intel Corporation

12. (Original) The article of claim 11, wherein the data, when accessed, results in the machine performing:
determining the determined average shared resource usage value.

13. (Original) The article of claim 11, wherein the data, when accessed, results in the machine performing:

adjusting the determined average shared resource usage value to provide a scaled average shared resource value based on a port speed associated with a first port and a port speed associated with a second port, wherein the first port and the second port are included in the number of ports.

- 14. (Original) The article of claim 11, wherein controlling the data flow further comprises: controlling the data flow associated with the at least one of the selected number of ports having the actual usage value above a dynamic threshold value.
- 15. (Original) The article of claim 14, wherein the data, when accessed, results in the machine performing:

setting the dynamic threshold value as a sum of a scaled average shared resource usage value and a delta value.

- 16. (Original) The article of claim 11, wherein the resource is a memory.
- 17. (Currently Amended) The article of claim 11, wherein determining the determined average shared resource usage value comprises:

selecting the selected number of ports by locating at least one port included in a plurality of ports using the [[an]] amount of the resource greater than the guaranteed minimum amount;

determining a cumulative shared usage value based on the selected number of ports; and determining the determined average shared resource usage value by dividing the cumulative shared usage value by the selected number of ports.

Serial Number: 10/705,315

Filing Date: November 10, 2003

Title: DATA FLOW MANAGEMENT APPARATUS, SYSTEMS, AND METHODS (As Amended)

Assignee: Intel Corporation

18. (Previously Presented) The article of claim 17, wherein determining the cumulative shared usage value comprises:

over the selected number of ports, summing the amount of the resource used that is greater than the guaranteed minimum amount.

19. (Currently Amended) An apparatus, comprising:

a controlling module to control a data flow associated with at least one of a selected number of ports having an actual usage value above a determined average shared resource usage value associated with the selected number of ports sharing a resource, wherein the selected number of ports each use an amount of the resource greater than after exceeding a guaranteed minimum amount of the resource.

- 20. (Original) The apparatus of claim 19, further comprising:
- an average determination module to determine the determined average shared resource usage value.
- 21. (Original) The apparatus of claim 20, wherein the determined average shared resource usage value is determined by determining a cumulative shared usage value based on the selected number of ports and dividing the cumulative shared usage value by the selected number of ports.
- 22. (Previously Presented) The apparatus of claim 21, wherein the cumulative shared usage value is determined by summing, over the selected number of ports, the amount of the resource used that is greater than the guaranteed minimum amount.
- 23. (Original) The apparatus of claim 19, wherein the controlling module comprises a network processor.
- 24. (Original) The apparatus of claim 19, further comprising:

Page 6 Dkt: 884.A59US1 (INTEL)

AMENDMENT UNDER 37 C.F.R. 1.116 - EXPEDITED PROCEDURE

Serial Number: 10/705,315

Filing Date: November 10, 2003

Title: DATA FLOW MANAGEMENT APPARATUS, SYSTEMS, AND METHODS (As Amended)

Assignee: Intel Corporation

a Layer 2 Ethernet switch.

25. (Currently Amended) An apparatus, comprising:

- a memory having a transmit queue storage;
- a plurality of ports coupled to the memory;
- a reservation module coupled to the plurality of ports to provide a minimum memory resource per port and to share a remaining memory resource among the plurality of ports using more than the minimum memory resource:

an average determination module to determine a determined average shared resource usage value greater than the minimum memory resource; and

a controlling module to control a data flow associated with at least one of the plurality of ports having an actual usage value above the determined average shared resource usage value.

- 26. (Original) The apparatus of claim 25, wherein average determination module is to determine the determined average shared resource usage value by determining a cumulative shared usage value based on the plurality of ports and dividing the cumulative shared usage value by the plurality of ports.
- 27. (Original) The apparatus of claim 25, wherein the memory is to store a plurality of packets in the transmit queue storage.

28. (Currently Amended) A system, comprising:

a controlling module to control a data flow associated with at least one of a selected number of ports having a first actual usage value above a determined average shared resource usage value associated with the selected number of ports sharing a resource, wherein the selected number of ports each use an amount of the resource greater than after exceeding a guaranteed minimum amount of the resource; and

a connector including at least one of the selected number of ports.

Page 7 Dkt: 884.A59US1 (INTEL)

AMENDMENT UNDER 37 C.F.R. 1.116 - EXPEDITED PROCEDURE

Serial Number: 10/705,315 Filing Date: November 10, 2003

Title: DATA FLOW MANAGEMENT APPARATUS, SYSTEMS, AND METHODS (As Amended)

Assignee: Intel Corporation

29. (Original) The system of claim 28, further comprising: an omnidirectional antenna to receive information included in the data flow.

- 30. (Original) The system of claim 28, further comprising: a memory coupled to the selected number of ports.
- 31. (Original) The system of claim 30, wherein the memory comprises a transmit queue storage.
- 32. (Original) The system of claim 28, further comprising: a communications medium to couple to the connector.